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**REMARKS**

Claims 1, 3, 5, and 7–23 are pending with claims 2, 4, and 6 canceled, and claims 17–23 added.

**Objection to Abstract**

The abstract has been deleted in its entirety and replaced with a new abstract hereto.

**Claim Rejections Under 35 U.S.C. § 112 and § 101**

Claims 1–16 stand rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite and claims 14–15 stand rejected under 35 U.S.C. § 101. Applicants have amended the claims to remove most of these rejections, as well as other amendments to conform the claims to typical U.S. prosecution practice. Applicants respectfully submit that none of these amendments narrow the scope of the claims.

With respect to the allegation that defining a “heterocyclic ring” as a group for  $R^1$  and “heteroarylalkyl” as a group for  $R^6$ , is indefinite pursuant to *In re Wiggins*, 179 U.S.P.Q. 421 (CCPA, 1973), applicants respectfully traverse these assertions.

With respect to defining the group  $R^{16}$ , which is a group included in  $R^1$ , as a heterocyclic ring, applicants respectfully submit that the holding in *In re Wiggins* is not relevant. The breadth of a claim is not to be equated with indefiniteness. See *In re Miller*, 441 F.2d 689, 169 U.S.P.Q. 597 (CCPA 1971) and M.P.E.P. § 2173.04. Thus, applicants respectfully submit that the mere breadth of a claim term should not be subject to a rejection under 35 U.S.C. § 112, second paragraph, and respectfully submit that these rejections should be withdrawn.

Additionally, in the case *In re Wiggins* there was no evidence presented that one of ordinary skill in the art would understand that a heterocyclic group designated a closed ring structure in which one or more of the atoms in the ring is an element other than carbon. See attached definition of heterocyclic and examples in *Hawley's Condensed Chemical Dictionary* (1997). Applicants respectfully submit that unlike the rationale in *In re Wiggins* one of skill in the art would understand that a heterocyclic ring means a carbon ring with at least one carbon atom replaced by another element. Consequently, applicants respectfully submit that one of skill in the art would readily understand the metes and bounds of the claimed invention.

With respect to the terminology "a heteroarylalkyl group" and "optionally substituted," applicants again refer to the fact that the breadth of a claim is not to be equated with indefiniteness. Moreover, the case *In re Wiggins* is not applicable here. Particularly, *In re Wiggins* dealt with the terminology of a "heterocyclic ring." In marked contrast, its holding should not be expanded to encompass the terminology "optionally substituted" and "a heteroarylalkyl group." In addition, the rationale for the holding in *In re Wiggins* is that its particular "heterocyclic ring" could encompass other atoms besides carbon, e.g., silicon. With respect to the group  $R^{62}$ , which is a group included in  $R^6$ ,  $R^{62}$  is defined as a "heteroarylalkyl group with 7–20 C atoms." Consequently, this definition of a heteroarylalkyl group as defined by  $R^6$  further demonstrates that the holding in *In re Wiggins* is not applicable.

Consequently, applicants respectfully submit that the rejections should be withdrawn.

**Claim Objections**

Claims 1-16 stand objected as allegedly being an improper Markush grouping. Applicants have amended the claims to delete the other groupings, but respectfully submit that this amendment in no way acquiesces to the basis of the objections. Rather, the amendment is merely made to expedite prosecution.

**Priority Application**

Attached hereto is a certified copy of the priority application along with an English translation.

In view of the above, favorable reconsideration is courteously requested. If there are any remaining issues which can be expedited by a telephone conference, the examiner is courteously invited to telephone counsel at the number indicated below.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,

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*Hawley's*  
*Condensed Chemical*  
*Dictionary*

*THIRTEENTH EDITION*

*Revised by*  
Richard J. Lewis, Sr.



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707 High molecular weight polyol ester.

707A High molecular weight polyol ester.

Use: High-temperature vinyl electrical insulation.

900 High molecular weight polyester.

Use: Plasticizer for polyvinyl acetate.

**"Hercolube" [Aqualon].** TM for synthetic lubricant base stocks. Saturated aliphatic ester of pentaerythritol for plasticizing vinylidene chloride. Derived from pentaerythritol esters of saturated fatty acids.

**"Hercolyn" D [Aqualon].** TM for a pale, viscous liquid; the hydrogenated methyl ester of rosin. Use: Plasticizing resin.

**hercules trap.** Water-measuring liquid trap used in aquametry when the material collected is heavier than water.

**"Herculoid" [Aqualon].** TM for nitrocellulose containing 10.9–11.2% nitrogen.

Hazard: See nitrocellulose.

Use: Pyroxylin plastics.

**"Herculon" [Aqualon].** TM for polypropylene olefin fibers. Available in bulked continuous and continuous multifilament yarns, staple, and uncut tow.

Use: Apparel, home furnishings, and industrial applications.

**heroin.** See diacetylmorphine.

**herring oil.** See fish oil.

**Herschbach, Dudley R.** (1932–). Awarded the Nobel prize in chemistry in 1986 for work reporting that the energies of reactions of crossed molecular beams of isolated alkali metal atoms and alkyl halide molecules appeared mostly as vibrational excited states of products. This method of studying all types of chemical reactions led to a more detailed knowledge of reaction processes. Doctorate awarded from Harvard in 1958.

**Herzberg, Gerhard.** (1904–). A German-born physicist who won the Nobel prize for chemistry in 1971 for his work on the composition of molecules. His research involved the spectroscopy of atoms and molecules and their excitation behavior. He became a Canadian citizen and was the director of the Division of Pure Physics of the National Research Council of Canada.

**Herzig-Meyer determination of N-alkyl groups.** N-alkylamines are refluxed with hydriodic acid and the quaternary alkyl ammonium iodides are pyrolyzed to split off alkyl iodide, which is determined gravimetrically by conversion to silver iodide or titrated as iodate.

**Herz reaction; Herz compounds.** Formation of *o*-aminothiophenols by heating aromatic amines with excess sulfur monochloride. The first products formed are thiazothionium halides known as Herz compounds. If the position next to the amino group is unoccupied, chloride is substituted at this position during the reaction.

**hesperidin.**

CAS: 520-26-3.  $C_{28}H_{34}O_{15}$ . A natural bioflavonoid of the flavanone group.

Properties: Fine needles. Mp 258–262°C. Soluble in dilute alkalies and pyridine.

Derivation: Extraction from citrus fruit peel.

Use: Synthetic sweetener research.

**Hess's law.** The heat evolved or absorbed in a chemical process is the same whether the process takes place in one or in several steps; also known as the law of constant heat summation.

**hetastarch.** A starch derivative containing 90% amylopectin.

Use: Blood plasma volume expander.

**heteroaromatic.** See heterocyclic.

**heteroazeotrope.** Azeotropic mixture having more than one liquid phase in equilibrium with the vapor phase at the boiling points.

**heterocyclic.** Designating a closed-ring structure, usually of either 5 or 6 members, in which one or more of the atoms in the ring is an element other than carbon, e.g., sulfur, nitrogen, etc. Examples are pyridine, pyrrole, furan, thiophene, and purine.



thiophene



pyridine

**heterogeneous.** (Latin "different kinds"). Any mixture or solution comprised of two or more substances regardless of whether they are uniformly dispersed. Common examples are such diverse materials as air (a mixture of 20% oxygen and 80% nitrogen), milk, marble, paint, gasoline, blood and mayonnaise. In all such cases, the mixtures can be separated mechanically into their components. "Homogenized" milk is as heterogeneous as regular milk and the term is, strictly speaking, a misnomer.

See homogeneous; mixture.

**heterogeneous catalysis.** See catalysis, heterogeneous.

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